

DISCLOSURE

This invention relates to an air "vent" and particularly to the air "vent" that is located in on an outside wall and is connected to the return air on a furnace system. In the heating industry of a Residential Building, this is commonly known as a Fresh Air Intake and is for maintaining a neutral and positive pressure, with the furnace drawing 10% of fresh air through the "vent" into the furnace system, then dispersing through the Residential Building. This 10% (80CFM and higher) is calculated by the size of the furnace and size of the Residential Building and where the Fresh Air Intake "vent" is attached to the return air duct.

Fresh air intake "vents" are known, but previous fresh air intake "vents" rust, are easily damaged, and allows through it's $\frac{1}{4}$ " (6mm) or $\frac{1}{2}$ " (12mm) screen, flies, bugs, vermin, pollens, dust mites, pollutants and other debris that plugs up the furnace filter and contaminates the duct system. It also plugs up during the winter with frost and snow, and is difficult to clean. This particular fresh air intake "vent" must remain fully open and clear of debris to allow the 10% of fresh air volume to flow through the "vent", through the passage and into the return duct, also complying with the National and Regional Building Codes.

It is the object of this present invention to provide a Fresh Air Intake "vent" that doesn't rust, freeze up or plug up, is inexpensive, user friendly and simple to install on an existing Residential Building as well as new Residential Buildings. An easily cleaned pre-filter system where no special tools are required, that protect the furnace system from bugs, flies, vermin, allergens, pollen and other pollutants that create a health hazard in the Residential Building furnace system and at the same time being non restrictive and allowing the 10% of air flow through the "vent" to the return duct, complying with the codes.

A Fresh Air Intake "vent" for use on an outside wall is connected to an elongated passage extending through the wall. The elongated passage being 4", 5" or 6" in circumference. The length of the passage depends on how far the return duct is from the outside wall (not shown). The passage has an outer and inner end. The inner end being connected to the return duct and the outer end being connected to the "vent" housing. The elongated passage is connected to the "vent" housing by inserting it into a corresponding inverted flange and putting a screw threw the top of the inverted flange and passage.

NOTE: Passage could be made of PVC, galvanized metal, etc.

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IN THE DRAWINGS

Fig 1 is a sectional side view of the vent structure with complete details and specifications.

Fig 2 is a sectional side view of the vent structure showing the filter seat and pull-tab for locking filter-recessed opening.

Fig 5 is a rear view showing the base that fits against the wall, six screw holes and specifications on the base size and opening to the elongated passage.

Fig 3 is a front view showing the specifications of the pull-tab for locking in and releasing the filter.

Fig 4 is a rear view showing the same as Fig 5, but showing the filter placement and the shape of the front part of the housing attached to the rear flange.

Fig 6 is a sectional side view showing how to remove and re-install the filter, also showing the filter and raised grill pattern.

In figure 2, a fresh air intake vent comprising of 2, one-piece structure, having a flange 1, mounting to an outside wall (not shown). The inverted flange 5 for connecting to an elongated passage (not shown).

In figure 6, a filter frame 8, placed in 4, seat stabilized by 6, tab and 3, lock and pull tabs, 8 aluminum frame contains 9, two raised pattern grills to hold in poly med material.